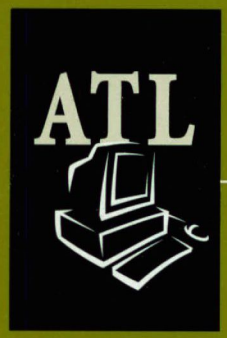
Individualized Program Planning (2006) now available at www.education.gov.ab.ca/k_12/specialneeds/ipp.asp
See Chapter 9: *Infusing Assistive Technology for Learning into the IPP Process.*



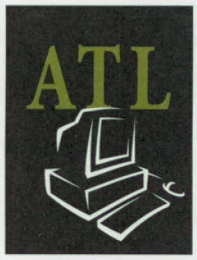
Assistive Technology for Learning and the IPP Process

Spring 2005

DRAFT

AE
ASS

Alberta
EDUCATION



Assistive Technology for Learning and the IPP Process

Spring 2005

ATA LIBRARY
11010 - 142 Street NW
Edmonton, AB
T5N 2R1

DRAFT

Alberta
EDUCATION

AE
ASS

#22868

Alberta Education Cataloguing in Publication Data

Alberta. Alberta Education. Learning and Teaching Resources Branch.
Assistive technology for learning and the IPP process.

This resource was developed in consultation with the I CAN Centre, Glenrose Rehabilitation Hospital, Capital Health, Edmonton, Alberta.

For further information, contact:

Learning and Teaching Resources Branch
8th Floor, 44 Capital Boulevard
10044 – 108 Street NW
Edmonton, Alberta T5J 5E6
Telephone: 780–427–2984 in Edmonton or
toll-free in Alberta by dialing 310–0000
Fax: 780–422–0576

The primary intended audience for this document is:

Teachers	✓
Administrators	✓
School Staff	✓
Health-related Professionals	✓
Counsellors	
Students	
Parents	
General Public	

This document will be published as a chapter in the new Alberta Education teacher resource, *Individualized Program Planning.*

A draft version of the entire *Individualized Program Planning* resource, plus the response guide, is available on the Alberta Education Web site at www.education.gov.ab.ca/k_12/specialneeds/ until June 30, 2005.

Please note: Several Web sites are listed in this document. These sites are listed as a service only to identify potentially useful ideas for teaching and learning. The responsibility to evaluate these sites rests with the user.

Copyright ©2005, the Crown in Right of Alberta, as represented by the Minister of Education. Alberta Education, Learning and Teaching Resources Branch, 10044 – 108 Street NW, Edmonton, Alberta, Canada, T5J 5E6.

Permission is given by the copyright owner to reproduce this draft document for educational purposes and on a nonprofit basis, with the exception of materials cited for which Alberta Education does not own copyright.

©Alberta Education

TABLE OF CONTENTS

2 Continuum of Assistive Technology for Learning
4 Benefits of ATL
6 Choosing Appropriate ATL Solutions
6 Team decision making
7 Identifying ATL solutions
12 Evaluating ATL solutions
13 Assistive technology for learning toolkit
16 Creating an ATL Implementation Plan
16 Training
17 Technical support
17 Monitoring
18 Making ATL Part of the IPP Process
21 ATL Solutions as Essential IPP Information
21 IPP goals and objectives
21 Required classroom accommodations
21 Required coordinated services
22 Transition plans
23 Looking to the Future: Universal Design for Learning
24 For More Information
25 Other providers of ATL
26 Assistive Technology for Learning Web Sites
30 Selected Bibliography on Assistive Technology for Learning

33 Appendices

34 A Assistive Technology for Learning Checklist
35 B Printing and Handwriting Inventory
37 C Writing Inventory
38 D Assistive Technology for Learning Investigation: Student Report
39 E Assistive Technology for Learning Trial Record
43 F Assistive Technology for Learning Trial Record: Student Report
44 G Monitoring My Assistive Technology for Learning Use: Student Report
45 H Parent Feedback on Assistive Technology for Learning
47 I Record of Assistive Technology for Learning Maintenance Information
48 J Assistive Technology for Learning Transition Planning Checklist
50 K Sample Questions for Parents about Assistive Technology for Learning

©Alberta Education

Assistive Technology for Learning and the IPP Process

> *"The success of technology has more to do with people than machines. All the right parts and pieces together won't work miracles by themselves. It is people who make technology powerful by creatively using it to fulfill their dreams"*
>
> Alliance for Technology Access 1996

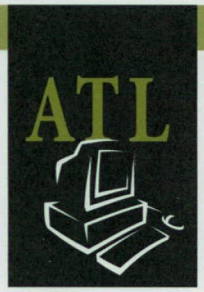
Arguably, all technology can be described as assistive technology—it assists us in doing something better, easier or faster. Assistive technology for learning (ATL) refers to a broad range of classroom materials, devices, media and other technologies that give individual students increased access to learning opportunities. Like other technologies, ATL ranges from simple tools to complex systems. It could be as simple as providing a pencil grip for writing or as complex as a computer with screen reading software for reading and learning.

Assistive technology for learning is different from educational or instructional technology. Educational technology is generally used by all students in the classroom; ATL is more specialized and often more complex technology that allows access to learning for students who have barriers due to their disabilities. However, there is some overlap. ATL can have benefits as an instructional tool for all students. For example, text-to-speech software can benefit all students who are learning to write and keyboard. Likewise, students with special needs may benefit from educational technology such as reading instruction software programs, but they may also need assistive technology for learning, such as a specialized mouse or keyboard, to access these programs.

Areas where assistive technology for learning may positively impact a student's success in learning include but are not exclusive to:

- printing and handwriting
- reading
- writing
- studying
- math
- computer access
- vision
- hearing
- communication.

©Alberta Education



Continuum of Assistive Technology for Learning

The term assistive technology for learning represents a continuum of tools ranging from low- to high-tech. Low-tech and many mid-tech tools are often available in office supply stores or electronics stores, and are common in most classrooms. Other mid-tech tools are available only from specialized vendors. High-tech tools are frequently computer-based solutions that focus on the specialized needs of an individual student, although there are cases in which a high-tech tool provided for one student can benefit other students in the classroom. For example, a sound-field FM amplification system, which uses a classroom speaker system to boost the voices of the teacher and individual students, allows the voices to be clearly heard by all students in the classroom, not only the individual student with hearing difficulties.

Some examples of ATL are shown on the sample continuum below.

Sample Continuum of Assistive Technology for Learning

Low-tech

- Raised line paper
- Alternative writing surfaces (e.g., white boards)
- Alternative writing implements (e.g., magnetic letters, alphabet stamps, magnetic words)
- Materials to support memory, focus and organization (e.g., sticky notes, highlighters, webs)

©Alberta Education

Many students with special needs require both low-tech and high-tech solutions to be successful learners. The general rule is to begin with the lower-tech solutions and progress to more complex technologies only if the low-tech options do not adequately reduce barriers to learning. For example, the best solution for a student whose handwriting is difficult to recognize might be a portable word processor with memory, rather than a more costly laptop.

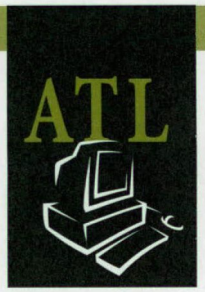
Mid-tech

- Tape recorders
- Calculators
- Talking calculators
- Talking spell checkers
- Audio books
- Dedicated word processors (e.g., Alphasmarts)
- Simple voice playback devices (e.g., talking picture frames)

High-tech

- Specialized software such as:
  - talking word processors
  - word prediction software
  - screen reading software
  - scan-and-read software
- Dedicated communication devices
- Specialized computer access such as:
  - touch screens
  - alternative keyboards
  - switch adapted mice
  - refreshable Braille display

©Alberta Education



Benefits of ATL

To understand how assistive technology for learning can create positive outcomes for students with sensory, physical, cognitive or other learning challenges, consider the following stories of students who are using ATL in the classroom. In each case, having appropriate ATL tools and supports is creating opportunities for the student to participate, learn and succeed.

Adam's story

Adam is a kindergarten student with cerebral palsy who communicates by using a voice output communication device. He is learning to write by attaching his speech device to the classroom computer. Adam also uses many low-tech tools such as alphabet boards to participate in writing activities, page fluffers to help him turn the pages of books, and a light pointer attached to a baseball cap so that he can point to things in the classroom.

Susan's story

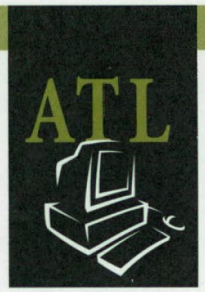
Susan is a Grade 6 student who struggles with reading, although when materials are read to her, she can understand grade-level concepts very well. Susan uses scan-and-read software to access print materials in the classroom. This allows her to be independent with reading tasks as she can scan materials on her own. She can read e-books and other electronic materials independently and can do research on the Internet.

Susan also has difficulties printing and spelling. She uses a dedicated word processor to ensure her writing is readable. For more complex writing, the talking word processor helps her to hear what she is writing so she can correct her own errors. She also uses the word prediction software if she is struggling to spell a word. This technology is helping Susan demonstrate what she knows, and be a more independent, confident and successful learner.

©Alberta Education

Marti's story

Marti is a Grade 10 student with partial paralysis caused by a vehicular accident. Marti cannot hold a pencil but she can type with two fingers as long as she has a keyguard to help guide her hands. Marti has learned to be very fast with this two-finger typing method. She writes using a dedicated word processor. She takes notes and types her assignments on her portable dedicated word processor. She then transfers this data to a computer to edit and print. Marti also uses math processing software to write math equations and do computations. She has customized keyguards for all of her devices so that it is easier for her to target the keys. Marti is an strong writer and hopes to go on to be an English major at university.



Choosing Appropriate ATL Solutions

Investigating whether or not individual students might benefit from ATL, and which ATL would be most appropriate in meeting their needs, is an ongoing process that involves working as a team to explore alternatives, gather information and set up opportunities for students to try potential ATL solutions across learning environments.

Team decision making

Evidence shows that ATL plans are more likely to be well-implemented when the student's entire learning team is involved in the initial decision making. Teachers, parents and the students themselves should all be involved in identifying and selecting ATL solutions. As with any kind of accommodations, the ultimate goal of assistive technology for learning is to help students become more independent, so it is essential that they participate as fully as possible in the selection, implementation and monitoring of ATL solutions. Students may be reluctant to use certain tools because they fear it will make them stand out in the classroom; involving students in decision making increases the likelihood that they will use the technology effectively and consistently. Parents should also be as involved as possible in decision making around ATL by thinking about, advocating for and actively supporting their child's use of assistive technology for learning. Because of the specialized knowledge as well as the potential expense involved, it may be most effective to involve students and parents once some viable possibilities have been identified.

Specialists such as occupational therapists, vision teachers or speech-language pathologists may be brought in to support the school team in ATL decision making, especially for children with more complex needs. For example, occupational therapists may provide assistance in exploring ATL tools for writing, including computer modifications and low-tech supports like pencil grips, slant boards and specialized writing materials. Speech-language pathologists may help the team identify low- and high-tech systems for a student with communication difficulties. Audiologists and vision consultants can provide expertise for students who need to overcome sensory barriers to learning. Physical therapists can assist in mobility issues and may have expertise in computer access solutions for students with physical challenges.

In addition, school or district technology personnel should be included in the consideration process. These individuals can provide advice and support to

©Alberta Education

the learning team. Some districts also have ATL specialists who are available to provide information to the team. There are a number of ways schools and districts can build capacity in the area of ATL, including providing access to conferences, workshops, online resources and information, and facilitating sharing of expertise with other schools and districts.

See pages 24–29 for a listing of sample Web sites and resources for ATL that may be helpful to school teams needing more information.

Identifying ATL solutions

As the learning team begins exploring potential ATL solutions, a standard set of investigative questions, such as the SETT Framework developed by Joy Zabala, can serve as a tool for gathering and organizing data. The SETT Framework considers the student, the environment, the task and then the tools needed by the student to address the tasks. Using the questions in the framework, the learning team can generate a list of basic ATL tools and strategies to help the student be better able to complete identified tasks in the school environment.

SETT Framework

The STUDENT

- What does the student need to do (that they are unable to do now and that assistive technology for learning may be able to support)?
- What are the student's special needs?
- What are the student's current abilities?

The ENVIRONMENT

- What materials and equipment are currently available in the learning environment?
- What is the physical arrangement?
- What is the instructional arrangement? Are there likely to be changes?
- What supports are available to the student?
- What resources are available to the people supporting the student?

The TASKS

- What activities take place in the environment?
- What activities support the student's learning?
- What are the critical elements of the activities?
- How might the activities be modified to accommodate the student's special needs?
- How might technology support the student's active participation in those activities?

The TOOLS

- What low-tech, mid-tech and high-tech options should be considered when developing a system for a student with these needs and abilities doing these tasks in these environments?
- What strategies might increase student performance?
- How might these tools be tried out with the student in the environments in which they will be used?

Adapted from Joy Zabala, "Introduction to the SETT Framework," *Joy Zabala's Resources for Assistive Technology in Education*, 1995, http://sweb.uky.edu/~jszaba0/SETTintro.html (Accessed August 2004).

■ **For more information on the SETT Framework, go to www.joyzabala.com.**

Appendices

See Appendices A–D for sample forms to use for identifying what kinds of ATL solutions an individual student might benefit from.

When discussing tool options, the team may need to get more information on what ATL tools are available. Begin by exploring what you already have. In many instances, there are tools available in the classroom that can be used in a different way and therefore become assistive technology for learning for a student. For example, all computers have accessibility options available in the control panels. Changes can be made in keyboard and mouse control panels.

■ **For more information on built-in accessibility features, see:**

- http://www.microsoft.com/enable/ – for Windows systems
- http://www.apple.com/accessibility/ – for Macintosh systems.

©Alberta Education

Continue to look for other ideas. Consider tools across the continuum, and seek out information on new tools as they emerge. A list of potential ATL tools, such as the ones below, can help teams to come up with new ideas. Tools are listed from simpler to more complex.

Reading

- Changes in text size/space/colour/background colour
- Book adapted for page turning (e.g., with page fluffers, three-ring binder and folders)
- Use of pictures with text
- Talking electronic devices for single words
- Scanner and talking word processor
- Electronic books

Organizing and Studying

- Print or picture schedules
- Low-tech aids to find materials (e.g., colour tabs, coloured paper or folders)
- Highlight text (e.g., markers, highlight tape, ruler)
- Voice output reminders for tasks, assignments, steps to tasks
- Software for manipulation of objects/concept development – may use alternate access method such as Touch Screen
- Software for organizing ideas and studying

Hand-held devices with scheduling software (e.g., Palm)

Mathematics

- Abacus, math line
- Calculator/calculator with printout
- Talking calculator
- Onscreen calculator
- Software with cueing for math computations
- Tactile/voice output measuring devices
- Software that provides onscreen manipulation
- Math processing software

Printing and Handwriting

- Variety of pencils and pens
- Pencils with adaptive grips
- Adapted paper (e.g., raised lines or highlighted lines)
- Slant board
- Prewritten words or phrases
- Templates
- Portable word processor
- Computer with word processor

Alternative Computer Access

- Keyboard with accessibility options
- Keyguard
- Alternative keyboard
- Dowel, mouth stick, headpointer with keyboard
- Word prediction, abbreviation/expansion to reduce keystrokes
- Alternative mouse (e.g., touchscreen, trackball, trackpad, joystick)
- Onscreen keyboard
- Switch with Morse code
- Switch with scanning
- Voice recognition

Spelling and Writing

- Word cards, word book, word wall
- Pocket dictionary, thesaurus
- Electronic dictionary/spell checker
- Word processor with spell check and grammar check
- Talking word processor
- Software with talking spell checker
- Word prediction software to facilitate spelling and sentence construction
- Multimedia software for production of ideas
- Voice recognition software

©Alberta Education

Vision

- Eyeglasses
- Magnifier
- Large print books
- Closed circuit television
- Screen magnification software
- Screen colour contrast
- Screen reader, text reader
- Braille materials
- Braille translation software
- Enlarged or Braille/tactile labels for keyboard
- Alternate keyboard with enlarged keys
- Braille keyboard and note taker
- Refreshable Braille computer display

Hearing

- Pen and paper
- Computer/portable word processor
- TTY/TDD with or without relay
- Signalling device
- Closed captioning
- Real-time captioning
- Computer-aided note taking
- Flash alert signal on computer
- Phone amplifier
- Personal amplification system/hearing aid
- Personal FM system
- Infrared system

Communication

- Communication board with pictures/words/objects
- Eye gaze frame
- Simple voice output device
- Voice output device with sequencing
- Voice output display with multi message capability
- Voice output device with speech synthesis

Adapted from Penny Reed and Paula Walser, "Wisconsin Assistive Technology Initiative Assistive Technology Checklist" (Oshkosh, WI: Wisconsin Assistive Technology Initiative, 2000).

When identifying possible ATL tools, remember that one student may use several different technologies to accomplish different tasks. For example, students with visual impairments may use a variety of tools such as a Braille keyboard and screen reading software, as well as a talking calculator and talking word processor. Start with what students need to be able to do, and then consider tools from simple to complex that will allow them to do that task.

Evaluating ATL solutions

Once a number of possibilities have been identified, the learning team must evaluate the options and determine the technologies that are most likely to be effective for the particular student. When evaluating assistive technology for learning, it is important to consider what services and supports are needed in addition to the devices. Appropriate use of ATL includes an understanding not only of what the things are, but also of how to use them effectively to make a difference for students.

Questions that the learning team may consider in evaluating ATL tools include the following.

- What are the educational goals for this student?
- What does this student need to be able to do in order to meet these goals?
- What has been tried to address these needs?
- What technology is currently available and could it be customized to meet the student's needs?
- If there is more than one tool that does the same type of thing, which tool will be best for this student?
- How will this tool help the student to increase his or her level of independence?
- What skills will the student need in order to use the tool effectively?
- Will the student require specific training in order to acquire the skill? If so, who will provide the training?
- Is the technology needed throughout the school environments? At home? In the community?
- What people in the school or district have the expertise to support the ATL process? Who will support the student's use of the ATL?
- How will this technology grow with the student?

©Alberta Education

- Is the solution cost-effective?
- What strategies will need to be used to implement the tools consistently and effectively?
- How will we measure how well the ATL is working? What will success look like?

The general rule of ATL purchases, like most other major purchases, is *don't buy it until you try it*. Real trials of the ATL need to be done before purchasing the equipment for the student. Trials not only demonstrate how well the solution may work for the student, but also help the team to understand what needs to happen to support ongoing implementation of the ATL. There are a number of possibilities for trying out ATL tools, including the following:

- locating a demo version of software—many companies have demo CDs that will run for a limited period of time
- borrowing the equipment on a short-term loan—many ATL vendors will provide short-term loans of equipment to try with students; some school districts and health facilities also have lending libraries of equipment
- accessing the tool through the school's ATL toolkit.

Assistive technology for learning toolkit

Ideally, the selection and implementation of assistive technology for learning should begin at the school or district level. One idea that is gaining support in various school districts is creating an ATL toolkit. An ATL toolkit consists of a set of easy-to-use, cost-effective media and devices that assist teams when considering ATL options for students. By putting together an ATL toolkit, schools may be able to address the needs of a number of individual students without having to refer them for an ATL evaluation by a specialized team. The toolkit would be readily available for school staff to try with a student in classroom environments. School teams can use the sample list of ATL tools from the preceding pages as a starting point for creating their own ATL toolkits.

Assistive technology for learning allows students to do things that, due to their disability, would otherwise be difficult or impossible for them to accomplish. Evaluating the effectiveness of the technology means focusing on how well students can perform those tasks with the technology in place.

Consider the following sample strategies for effectively conducting trial runs to evaluate ATL tools.

- Clearly define how the team expects the technology to affect student performance. Consider changes across many dimensions—will the student be faster? More accurate? More spontaneous? Produce more legible work or speech output? Or be able to do things independently? Know what type of change is realistic. Not all variables will change equally. For example, scan-and-read software may not help students read faster or more than they would if they had someone reading to them, but it may allow them to read independently.

- Consider the typical environments where the student will be using the technology. Doing a trial of software in a quiet room with no other distractions will not give an appropriate picture of how it will really work for the student in a busy classroom with other students.

- Use a template to record information during learning trials, particularly if several options are being evaluated.

Appendices

See Appendices E and F for sample forms to record data gathered during ATL trials.

In addition to trials themselves, there are a number of ways to gather information to evaluate ATL tools, including the following (Reed, Bowser and Korsten 2002).

- **Interviewing students.** After students have participated in trials of the ATL tools identified, ask students which technology they preferred. While not all students are capable of providing this kind of feedback, when it is possible, this information can help ensure that individual students are willing to use the tools selected, and help the team to understand what is or is not acceptable or helpful to them.

- **Reviewing finished products created by students.** This is the most commonly used method of gathering information. Students' work can be evaluated to see the difference in the product when using ATL. This method can work well for looking at quality and quantity of output. However, looking only at finished products may not tell the whole story, such as how long a task took or how many errors needed to be corrected.

- **Observing students' performance completing the task.** Observing students allows teachers to see changes in the process of the task completion. It involves taking the time to watch a student "in action," and making systematic notes about the events observed.

©Alberta Education

- **Videotaping students completing the task.** This type of data recording can show many things about qualitative change in the student's ability to accomplish the task. It can also create an opportunity to watch and discuss a tape in a group, making it more possible for discussion and a shared understanding that could lead to better decision making.

It is critical that relevant data be collected to make the best selection possible for an individual student. A magazine ad or article, a Web site reference or a vendor recommendation simply does not provide enough information for making an ATL decision for an individual student. Consider the following example to understand the importance of testing out and reflecting on ATL solutions before making decisions.

Joyce's story

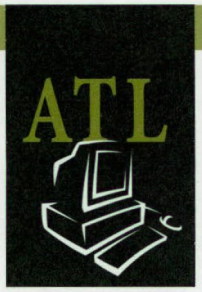
Joyce is a Grade 9 student who has a physical impairment that makes writing difficult. Her team wanted her to try to use speech recognition software on a laptop computer. Joyce learned to use the software at home on her desktop computer and was getting quite good at composing essays and papers for English and social studies.

Because of the apparent success with this ATL system, the school purchased Joyce a laptop with the software for Joyce's use. Joyce tried to use this system in her English class. The results were not good. First, the computer would run out of battery power at critical times. Joyce's classes were 80 minutes long. Her battery typically only lasted one hour. So, she moved her desk closer to the wall so that she could plug in at the beginning of each class.

Then, Joyce had difficulty talking into her computer while her teacher was talking. The computer "heard" other voices and this caused problems for the recognition feature. Joyce could correct these errors in class, but she found it difficult to talk and attend at the same time. Also, her talking, although quiet, was disruptive to other students seated near her.

Most importantly, Joyce was uncomfortable using this technology in class. She didn't want people to "hear" what she was writing, especially first drafts. Joyce was happy to use speech recognition at home to do longer assignments, but this was not the most appropriate tool for her to use in the classroom.

©Alberta Education



Creating an ATL Implementation Plan

If ATL tools are to be used effectively, planning for implementation is critical. An implementation plan usually involves the following four components:

- training the student to use the ATL
- training staff to understand and support the student's use of the ATL
- developing a technical support plan for managing equipment that the student will be using
- monitoring the effectiveness of the ATL tool.

It is also important that the team be proactive. Ensuring that appropriate ATL and training and support for new classroom staff is in place prior to a student's transition will save time, reduce frustration and be more cost-effective over the long term.

Putting the ATL implementation plan into action requires the learning team to think through questions about how the student will use the ATL, such as the following.

- What specific things need to happen to ensure that the ATL tools will be used effectively?
- Who will be responsible for seeing that these things happen?
- What tasks is the student going to use this technology for?
- Where is the student going to use the technology?
- What set-up and supports are necessary?

Training

The student is obviously a key person who will need training on the ATL tools, but it is just as important to make plans for training other people who will be working with the student on a regular basis. This includes teachers and teacher assistants, and parents if the student will be using his or her ATL at home. When the people who support the student on a daily basis do not understand the student's technology tools, assistive technology for learning use can seem too difficult or cumbersome and is more likely to be abandoned (Sherer 1993).

©Alberta Education

Technical support

The team also needs to identify where to go for technical support. They also need a plan for troubleshooting and device maintenance. If the student and the team know where to turn for help, it is more likely that the equipment will be used. Assistive technology for learning devices with minor problems (such as dead batteries that no one knows how to change) may be put on the shelf for days or weeks until a consultant can look at it. When the team sets up a system that can deal with anticipated (and sometimes unanticipated) technical problems, the student's use of the ATL is much more likely to be successful.

Monitoring

Change will happen for a number of reasons, including the following.

- The students themselves will change. They will mature, develop new skills and have different needs.
- The environments in which students function will change. Every year students attend new classrooms, the demands in those classrooms are different and the supports in those classrooms are different.
- Tasks will change. Each year will bring different curricular demands as well as different expectations for participation and changing definitions of what success looks like.

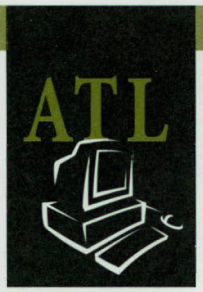
As students' needs change, their assistive technology for learning needs will also change. For this reason, ongoing monitoring of a student's ATL solutions is critical.

Appendices

See Appendices G and H for sample tools for gathering and organizing information for the monitoring process.

The SETT Framework can be used for ongoing review and adaptation. During times of transition, the team can use the framework to gather and review information.

©Alberta Education



Making ATL Part of the IPP Process

If students are to benefit from assistive technology for learning, the thinking about and planning for ATL needs to happen throughout the IPP process. The example below illustrates how Daniel's learning team used assistive technology for learning as an integral component of his IPP process.

1 Identifying strengths and needs

Daniel is a Grade 6 student who is struggling with reading and writing. Daniel's learning team explores the following questions.

- Will assistive technology for learning enable Daniel to be a more independent reader and writer?
- Will assistive technology for learning allow Daniel to work at a grade level more consistent with his cognitive ability?

2 Setting the direction

Using the SETT Framework to guide their decision making, the team decided that Daniel could benefit from ATL to support writing and reading.

3 Creating a plan

There are several different tools available that have potential to help Daniel be a more independent reader and allow him to check his own legible writings. The following ATL tools were identified as having potential to benefit Daniel:

- word prediction software
- talking word processing software
- scan-and-read software.

After trying out different demo versions of each type of software, it became obvious that one program with the ability to read scanned text, convert text to speech and perform word processing, worked best. It was the easiest for Daniel to use and also was most cost-effective.

The plan for using the software was documented in Daniel's IPP as both a writing goal and a reading goal.

©Alberta Education

Writing goals:

- Daniel will demonstrate that he can use the features of Software X to support his writing.
- Using word prediction software, Daniel will independently complete class writing assignments with at least five complete sentences.

Reading goal:

- Using scan-and-read software, Daniel will read textbooks and other grade-level materials independently in social studies.

4 Implementing the plan

Daniel, three of his teachers and one teacher assistant were trained on the software that was chosen. Daniel, two of his teachers and his mother were also interviewed by his IPP coordinator to share what outcomes they observed from Daniel's use of this technology.

Daniel needed further support to operate his ATL system more independently and the school arranged for a volunteer student teacher to help Daniel learn how to use the software. The school tech support teacher was also trained on the software and the system requirements (e.g., scanner, printer) so that she could support Daniel and his teachers.

With teacher support, Daniel will begin to maintain his own log of ATL strategies that work and device information.

Appendices — *See Appendix I for a sample tool for maintaining a log of ATL information.*

5 Reviewing and revising

The learning team continued to monitor Daniel's progress by asking the question: Does ATL continue to be effective at helping meet Daniel's learning needs?

All team members agreed that the software was helping Daniel be a more independent reader. He would eventually need more training so he could use the scanning system independently. Daniel's IPP was revised to make the scan-and-read software an accommodation.

His writing, although better, was still not reflective of his cognitive ability. The text to speech, talking spell checker and word prediction software had potential to be helpful but Daniel didn't consistently use the tools in the most productive way. A demo version of voice recognition software was introduced but Daniel does not currently have the skills to use this software independently. IPP goals continued in the area of using ATL to support and build on writing skills.

6 Transition planning

Daniel will be moving to junior high within the next year and the demands for independent reading will increase.

The SETT process was used again with specific focus on what new tasks Daniel will have in the upcoming junior high environment. The resulting decision was that Daniel will need a laptop computer and a scanning station in order to make materials available in each classroom. The new school worked with Daniel's current teacher to create an ATL system that would best meet Daniel's needs in his new school.

The team arranged for his receiving language arts teacher to come and observe Daniel using the ATL in his current classroom. This will also be an opportunity for his current Grade 6 teacher to talk to the receiving teacher about skills that Daniel will need to make a successful transition to junior high.

Appendices — *See Appendix J for a sample tool for planning transitions.*

©Alberta Education

ATL Solutions as Essential IPP Information

Information about assistive technology for learning can be part of the essential information required in the IPP for a student with special needs, including goal statements, required classroom accommodations, identification of coordinated support services and transition plans.

IPP goals and objectives

A goal related to assistive technology for learning could include learning how to best use the tool.
For example:

- *Daniel will demonstrate that he can independently use scan-and-read software to access reading material assigned in class.*
- *Using scan-and-read software, Daniel will independently read Grade 6 level materials for his social studies class, including the textbook and various other reading materials.*

ATL could also be a condition or provide a context for a related goal.

Required classroom accommodations

Once the appropriate ATL tools are identified, it is important to document their use as effective accommodations for an individual student.

For example, once Daniel's use of scan-and-read software had been well established and proved to be effective across environments, the essential information about ATL could move from the goal statement to the accommodations list.

- *Daniel needs the following classroom accommodations:*
  - *scan-and-read program X to independently read classroom materials*
  - *teacher assistant support to scan materials approximately 30 minutes per day.*

Required coordinated services

Human resources, knowledge and other support that make the ATL system work should be listed under the required coordinated services.

For example:

- *Daniel requires the services of:*
  - *district tech coordinator (annual maintenance of scanner, headphones and laptop computer)*
  - *district ATL specialist (annual consultation).*

Transition plans

It is important that all ATL tools and services are included in the IPP and are reviewed on a regular basis by the learning team. Documenting the ATL tools and strategies used successfully by students will help maintain success as these students transition through their school years.
For example:

- *Daniel will continue keyboarding instruction with the goal of typing 25 wpm.*
- *Team will investigate potential use of laptop for junior high.*

©Alberta Education

Looking to the Future: Universal Design for Learning

There is a growing understanding among educators that special learning needs can be accommodated by adopting the principles of universal design, which originated in the field of architecture. This means that instructional materials and activities should be designed so that students with broad differences in their abilities to see, hear, speak, move, read, write, understand language, attend to information, organize, engage and remember can achieve their learning goals.

Universal design for learning means flexible curricular materials and learning activities that provide alternative ways to participate for students with differences in abilities and backgrounds. These alternatives are not added afterwards; they are built into the design of the materials, equipment, instruction and activities.

As learning environments and resources become more universally designed and accessible to all, the need for assistive technology for learning will change. What is a critical specialized tool for an individual student today may be part of how all instruction is provided in the future. Technology is always changing. The promise of universal design is that changing technology will better address the needs of all learners.

©Alberta Education

For More Information

Alberta Consortium for Rehabilitative and Assistive Technology
www.acrat.ca

This Alberta initiative focuses on assistive technologies and the role they play in enabling participation in society by persons with disabilities.

Materials Resource Centre, Learning Resources Centre
www.lrc.learning.gov.ab.ca/pro/visual_imp/visual_imp_index-p.htm

The Materials Resource Centre (MRC) for the Visually Impaired Unit loans alternate format resources (Braille, audio, electronic resources and large print), kits, specialized equipment and professional resources to assist Alberta schools in the delivery of an educational program for ECS–Grade 12 students with visual impairments.

Regional Educational Consulting Services (RECS) Teams

RECS provide educational support services for children/students:

- aged 2.5 to 20 years
- in a school or ECS program
- meeting the criteria for Alberta Education exceptional student codes (41, 43, 44, 45, 46, 55, 56) and requiring the support of a multidisciplinary team. RECS are not available for ECS children/students with a severe delay involving language (code 47) unless there is evidence that the child/student has severe needs that are not reflected by the current code
- with mild/moderate disabilities (at Réseau provincial d'adaptation scolaire only).

RECS provide the following services:

- assessment to determine a student's strengths and areas of need for programming purposes
- consultation to schools as part of the learning team
- inservice to provide information on a wide range of topics that will support schools in providing positive learning opportunities and experiences for children/students.

For more information, contact your RECS team:

- CASE (Coordinated Assessment Services for the Exceptional), Grande Prairie, 780–513–7310

©Alberta Education

- ERECS (Edmonton Regional Educational Consulting Services), Edmonton, 780–472–4455
- REACH (Regional Education Assessment and Consultation Services), Calgary, 403–777–6983
- RÉSEAU (Réseau provincial d'adaptation scolaire, Francophone), Edmonton, 780–487–3200

Student Health Initiative
www.education.gov.ab.ca/shi/

The goal of the Student Health Initiative is to improve access to and enhance the provision of integrated health and related support services for children with special health needs so that they can participate fully in their educational programs to attain their potential and be successful at learning.

Other providers of ATL

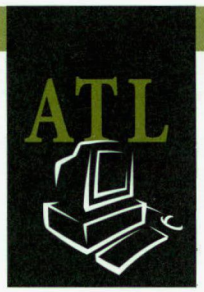
Augmentative Communication and Educational Technology Service (ACETS)

The Augmentative Communication and Educational Technology Service (ACETS) of the Alberta Children's Hospital, located in Calgary, is a multidisciplinary team that works in collaboration with families, therapy teams and caregivers. ACETS provides assessment, consultation, education, advocacy support and short-term intervention in augmentative and alternative communication strategies, and may include a combination of no technology, low technology and high technology. For more information, call 403–943–7023 or fax 403–244–0935.

The I CAN Centre
www.capitalhealth.ca/icancentre

The I CAN Centre at the Glenrose Hospital in Edmonton provides assessment, consultation, training, follow-up, education and research in assistive technology, specifically augmentative communication, adapted computer access, environmental controls and specialized power mobility. Other services include an equipment pool for short-term loans, a resource library, and workshops for teachers and other professionals.

©Alberta Education



Assistive Technology for Learning Web Sites

Alliance for Technology Access (ATA)
www.ataccess.org/

The Alliance for Technology Access (ATA) is a network of community-based resource centres, developers, vendors and associates dedicated to providing information and support services to children and adults with disabilities, and increasing their use of standard, assistive and information technologies.

Assistive Technology–Strategies, Tools, Accommodations and Resources (ATSTAR) Program
www.atstar.com

The Assistive Technology–Strategies, Tools, Accommodations and Resources (ATSTAR) Program is designed to increase ATL expertise through technology-enhanced learning environments.

Assistive Technology Training Online
www.at-training.com

The Assistive Technology Training Online Project provides Internet-based training in both general and specific areas of adapted computer use.

California State University at Northridge, Center on Disabilities
www.csun.edu/cod/

Located at California State University at Northridge, the Center on Disabilities develops and publishes materials of interest to the field of disability, and sponsors conferences, seminars and workshops.

Center for Applied Special Technology
www.cast.org

This site is a resource for expanding educational opportunities for individuals with disabilities through Universal Design for Learning.

Closing the Gap
www.closingthegap.com

This Web site spotlights resources in computer technology, special education and rehabilitation. The Web-searchable resource directory is a database of over 2000 hardware and software products.

©Alberta Education

Georgia Project on Assistive Technology
http://www.gpat.org

This federally funded project of the Georgia Department of Education, Division for Exceptional Students, provides a range of technical support services in the area of assistive technology for learning to state school system personnel and their students. A variety of helpful resources and forms are available.

Joy Zabala's Resources for Assistive Technology in Education
www.joyzabala.com/

This Web page introduces the SETT Framework and provides resources for learning more about assistive technology for learning devices and services in educational settings. It provides links to informational sites as well as sites which provide opportunities for participation in collegial discussions and research on assistive technology for learning.

LD Online
www.ldonline.com

This interactive Web site provides resources on learning disabilities to parents, teachers, children and other professionals. The site includes books, articles, videos and a newsletter.

National Assistive Technology Research Institute
http://natri.uky.edu/

The National Assistive Technology Research Institute conducts assistive technology research, translates theory and research into practice, and provides resources for improving the delivery of assistive technology services. The Institute is operated by the Department of Special Education and Rehabilitation Counseling at the University of Kentucky.

Oregon Technology Access Program
http://main.douglased.k12.or.us/wwwrootnew/otap.cfm

This program provides training, information, technical assistance and resources regarding the uses of technology for children with disabilities.

Quality Indicators for Assistive Technology
www.qiat.org

This consortium is an American grassroots group dedicated to identifying, disseminating and implementing a set of widely applicable quality indicators for assistive technology for learning services in school settings. The listserve provides a national forum for discussion of assistive technology for learning issues. Sign-up information is available on the Web site.

SET-BC
www.setbc.org/

SET-BC is a provincial resource program designed to assist school districts in British Columbia in meeting the technology needs of students with physical disabilities and sensory impairments.

Special Education Technology Practice
www.setp.net/

This is the site of special education technology professor and researcher Dave Edyburn. This site has links to the journal titled Special Education Technology Practice and other information regarding the use of technology in special education.

Special Needs Opportunity Windows (SNOW)
http://snow.utoronto.ca/

The Special Needs Opportunity Windows (SNOW) Project is a provider of online resources and professional development opportunities for educators and parents of students with special needs.

Technology and Media Division of the Council for Exceptional Children
www.tamcec.org

This division of the Council for Exceptional Children works to promote the effective use of technology and media for individuals with exceptional educational needs. The site includes information on conferences and professional publications including the *Journal of Special Education Technology*.

©Alberta Education

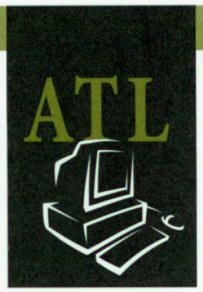
Texas Assistive Technology Network
www.texasat.net

This is a collaborative network between educational service centres in Texas. The site provides links, resources and training materials.

Wisconsin Assistive Technology Initiative
www.wati.org

This statewide project, funded by the Wisconsin Department of Public Instruction, helps school districts develop or improve their assistive technology for learning services. It includes information on best practices, training materials, resources and sample forms, and provides links to other sites related to assistive technology for learning.

©Alberta Education



Selected Bibliography on Assistive Technology for Learning

Bowser, Gayl (ed). *Assistive Technology Model Operating Guidelines for School Districts and IEP Team*. Roseburg, OR: The Advisory Committee of the Oregon Technology Access Program, June 2003.

Bowser, Gayl and Penny Reed. *Education Tech Points: A Framework for Assistive Technology Planning*. Winchester, OR: Coalition for Assistive Technology in Oregon, 1998.

Bowser, Gayl and Penny Reed. *Assistive Technology Pointers for Parents*. Winchester, OR: Coalition for Assistive Technology in Oregon, January 2000.

Bowser, Gayl and Penny Reed. *Hey! Can I Try That? A Student Handbook for Choosing and Using Assistive Technology*. Roseburg, OR: Oregon Technology Access Program and Wisconsin Assistive Technology Initiative, 2001.

Chambers, A. C. *Has Technology Been Considered? A Guide for IEP Teams*. Reston, VA: Council of Administrators of Special Education/Technology and Media Division, 1997.

Crowder, Elaine. "The Technology Continuum – Low, Medium, High." *EdTech Leaders Online. 2000.* www.edtechleaders.org/Resources/articles/continuum.htm (Accessed August 2004).

Dalton, Elizabeth M. "Assistive Technology in Education: A Review of Policies, Standards, and Curriculum Integration from 1997 through 2000 Involving Assistive Technology and the Individuals with Disabilities Education Act." *Issues in Teaching and Learning* 1, 1 (2002). www.ric.edu/itl/issue01/contentsDalton.html (Accessed August 2004).

Edyburn, Dave. "Research and Practice: Measuring Assistive Technology Outcomes: Key Concepts." *Journal of Special Education Technology* 18, 1 (2003), pp. 53–55.

Golden, Diane. *Assistive Technology in Special Education Policy and Practice*. Reston, VA: Council of Administrators of Special Education/Technology and Media Division, 1998.

©Alberta Education

Hitchcock, Chuck and Skip Stahl. "Assistive Technology, Universal Design for Learning: Improved Learning Opportunities." *Journal of Special Education Technology* 18, 4 (Fall 2003). http://jset.unlv.edu/18.4/hitchcock/first.html (Accessed August 2004).

Reed, Penny, Gayl Bowser and Jane Korsten. *How Do You Know It? How Can You Show It? Making Assistive Technology Decisions*. Oshkosh, WI: Wisconsin Assistive Technology Initiative, 2002.

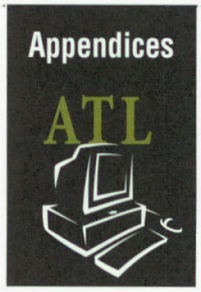
Schacter, John. *The Impact of Education Technology on Student Achievement: What the Most Current Research Has to Say*. Santa Monica, CA: Milken Exchange on Education Technology, 1999.

Scherer, Marcia J. *Connecting to Learn: Educational and Assistive Technology for People with Disabilities*. Washington, DC: American Psychological Association, 2004.

Wisconsin Assistive Technology Initiative. "Assistive Technology Assessment." *Wisconsin Assistive Technology Initiative*. 2004. www.wati.org (Accessed August 2004).

Zabala, Joy and Barbara Epperson. "Considering Assistive Technology in the IEP Process, The Texas 4-Step Model: Resource Guide." *Texas Assistive Technology Network*. 2003–2004. www.texasat.net/PDF/Resource%20Guide%2003-04.pdf (Accessed August 2004).

©Alberta Education



Assistive Technology for Learning and the IPP Process

A Assistive Technology for Learning Checklist

B Printing and Handwriting Inventory

C Writing Inventory

D Assistive Technology for Learning Investigation: Student Report

E Assistive Technology for Learning Trial Record

F Assistive Technology for Learning Trial Record: Student Report

G Monitoring My Assistive Technology for Learning Use: Student Report

H Parent Feedback on Assistive Technology for Learning

I Record of Assistive Technology for Learning Maintenance Information

J Assistive Technology for Learning Transition Planning Checklist

K Sample Questions for Parents about Assistive Technology for Learning

©Alberta Education

Assistive Technology for Learning Checklist

1. Student's performance is improved by (check [✓] all that apply):

- ☐ smaller amount of text on page
- ☐ bold type for main ideas
- ☐ enlarged print
- ☐ graphics to communicate ideas
- ☐ lowered reading level
- ☐ spoken text to accompany print
- ☐ reduced length of assignment
- ☐ other _____

_____

2. Assistive technology for learning that has been tried (check [✓] all that apply):

- ☐ highlighter, marker, template or other self-help aid
- ☐ tape recorder, taped text or talking books to read along
- ☐ talking dictionary (e.g., Franklin Speaking Language Master) to pronounce single words
- ☐ computer with talking word processing software to:
  - ☐ pronounce words
  - ☐ speak sentences
  - ☐ speak paragraphs

3. Computer availability and use (check [✓] all that apply)

The student has access to the following computer(s):

- ☐ Windows system
- ☐ Macintosh system

_____ _____

The student uses a computer:

- ☐ rarely
- ☐ frequently
- ☐ daily for one or more subjects or periods
- ☐ every day, all day

Adapted from Wisconsin Assistive Technology Initiative, *The W.A.T.I. Assistive Technology Assessment* (Oshkosh, WI: Wisconsin Assistive Technology Initiative, 2002), pp. 15–16.

©Alberta Education

Printing and Handwriting Inventory

1. **Student's current printing and handwriting ability (check [✓] all that apply):**

- ☐ holds regular pencil
- ☐ holds pencil when adapted with: _____
- ☐ holds pencil, but does not write
- ☐ prints name
- ☐ writes cursive
- ☐ prints a few words
- ☐ writing is limited due to fatigue
- ☐ writing is slow and arduous
- ☐ copies simple shapes
- ☐ copies simple words
- ☐ copies from board
- ☐ writes on 1" lines
- ☐ writes on narrow lines
- ☐ uses spacing correctly
- ☐ adjusts size of writing to fit spaces
- ☐ writes independently and legibly

2. **Student currently uses the following strategies for writing (check [✓] all that apply):**

- ☐ shortened assignments
- ☐ scribed by others
- ☐ verbal response instead of written response
- ☐ writing frames

3. **Assistive technology for learning used by student (check [✓] all that apply):**

- ☐ special pencil or marker
- ☐ splint or pencil holder
- ☐ pencil grip
- ☐ paper with heavier lines
- ☐ paper with raised lines
- ☐ adapted desk, tray, table
- ☐ slant board or easel
- ☐ tape recorder
- ☐ computer

4. **Current keyboarding ability (check [✓] all that apply):**

- ☐ does not currently type
- ☐ types slowly, with one finger
- ☐ types slowly, with more than one finger
- ☐ performs 10-finger typing wpm: _____
- ☐ requires arm or wrist support to type
- ☐ accesses keyboard with head or mouthstick
- ☐ uses Touch Window
- ☐ uses access software
- ☐ uses adapted or alternate keyboard, such as: _____
- ☐ uses switch to access computer
- ☐ other: _____

Adapted from Wisconsin Assistive Technology Initiative, *The Wisconsin Assistive Technology Initiative Student Information Guide* (Oshkosh, WI: Wisconsin Assistive Technology Initiative, 2000), p. 3.

©Alberta Education

(continued)

Printing and Handwriting Inventory

5. **Current computer use (check [✓] all that apply):**

- ☐ never used a computer
- ☐ potential to use computer but has not used a computer because:

_____

_____

_____

- ☐ uses computer for games
- ☐ uses computer for word processing
- ☐ uses spell checker on computer
- ☐ uses computer at school for these tasks:

_____

_____

_____

- ☐ uses computer at home for these tasks:

_____

_____

_____

6. **Computer availability:**

The student has access to the following computer(s):

☐ Windows system ☐ Macintosh system

_____ _____

7. **Summary of student's abilities and concerns related to printing and handwriting:**

©Alberta Education

Writing Inventory

1. **Student's current writing is typically:**

- ☐ single words
- ☐ short phrases
- ☐ complex phrases
- ☐ sentences
- ☐ 2–5 sentence paragraphs
- ☐ longer paragraphs
- ☐ multiparagraph reports
- ☐ other: _____

2 **Student currently has difficulty:**

- ☐ answering questions
- ☐ getting started on a sentence or story
- ☐ adding information to a topic
- ☐ sequencing information
- ☐ integrating information from 2 or more sources
- ☐ relating information to specific topics
- ☐ generating ideas
- ☐ working with peers to generate ideas/information
- ☐ planning content
- ☐ using a variety of vocabulary
- ☐ summarizing information
- ☐ other: _____

3. **Student currently uses the following strategies for writing:**

- ☐ verbal responses instead of written responses
- ☐ graphics to communicate ideas
- ☐ shortened assignments
- ☐ story starters
- ☐ webbing/concept mapping
- ☐ templates or writing frames to provide the format or structure (both paper and electronic)
- ☐ outlines
- ☐ scribing by others
- ☐ other: _____

4. **Student currently uses the following assistive technology for learning for writing materials:**

- ☐ word cards
- ☐ word book
- ☐ word wall/word lists
- ☐ personal dictionary
- ☐ electronic dictionary/spell checker
- ☐ talking electronic dictionary/spell checker
- ☐ symbol-based software for writing (e.g., Writing with Symbols 2000, Pix Writer)
- ☐ word processing with spell checker/ grammar checker
- ☐ talking word processing
- ☐ word processing
- ☐ voice recognition software
- ☐ other: _____

Adapted from Wisconsin Assistive Technology Initiative, *The W.A.T.I. Assistive Technology Assessment* (Oshkosh, WI: Wisconsin Assistive Technology Initiative, 2002), p. 11.

©Alberta Education

Appendix – D

ATL

Assistive Technology for Learning Investigation: Student Report

1. What I want assistive technology for learning to do for me: _____

2. What I **do** now to help with this problem: _____

3. Assistive technology for learning I already use: _____

4. What have I already tried that did not work? Why didn't it work? What would have made it better?

5. Things that other students use or that I have seen that might help me: _____

6. Things I want to tell teachers and others about things I have tried or want to try:

7. Questions I want to ask: _____

Adapted with permission from Gayl Bowser and Penny Reed, *Hey! Can I Try That? A Student Handbook for Choosing and Using Assistive Technology* (Roseburg, OR: Oregon Technology Access Program and Wisconsin Assistive Technology Initiative, 2001), p. 11. www.edtechpoints.org

©Alberta Education

Assistive Technology for Learning Trial Record – Goal for Device Use

Goal for assistive technology for learning device:

How will we know if the trial is successful?

What level of achievement is reasonable to expect during the trial period?

How will we know if the trial is not working (what criteria will we use to stop)?

Adapted with permission from Penny Reed and Gayl Bowser, *Assistive Technology Pointers for Parents* (Winchester, OR: Coalition for Assistive Technology in Oregon, 2000), p. 53. www.edtechpoints.org

©Alberta Education

(continued)

Assistive Technology for Learning Trial Record

– Learning Environments Where Devices Will Be Used

1. **Environment:** _____

   Tasks: _____

   _____

   _____

   Staff responsible for implementation: _____

   Days to be used: _____

   Times to be used: _____

2. **Environment:** _____

   Tasks: _____

   _____

   _____

   Staff responsible for implementation: _____

   Days to be used: _____

   Times to be used: _____

3. **Environment:** _____

   Tasks: _____

   _____

   _____

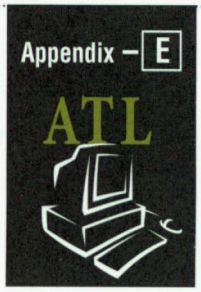
   Staff responsible for implementation: _____

   Days to be used: _____

   Times to be used: _____

Adapted with permission from Penny Reed and Gayl Bowser, *Assistive Technology Pointers for Parents* (Winchester, OR: Coalition for Assistive Technology in Oregon, 2000), p. 54. www.edtechpoints.org

©Alberta Education



(continued)

Assistive Technology for Learning Trial Record – Devices for Trial

Device #1 _____

Date of trial initiation: _____ Minimum length of trial period: _____

Device trial review date: _____

Source of device for trial: _____

Contact person for technical assistance for trial: _____

Manufacturer: _____

Manufacturer technical assistance number: _____

Comments: _____

Device #2 _____

Date of trial initiation: _____ Minimum length of trial period: _____

Device trial review date: _____

Source of device for trial: _____

Contact person for technical assistance for trial: _____

Manufacturer: _____

Manufacturer technical assistance number: _____

Comments: _____

Device #3 _____

Date of trial initiation: _____ Minimum length of trial period: _____

Device trial review date: _____

Source of device for trial: _____

Contact person for technical assistance for trial: _____

Manufacturer: _____

Manufacturer technical assistance number: _____

Comments: _____

Adapted with permission from Penny Reed and Gayl Bowser, *Assistive Technology Pointers for Parents* (Winchester, OR: Coalition for Assistive Technology in Oregon, 2000), p. 54. www.edtechpoints.org

©Alberta Education

(continued)

Assistive Technology for Learning Trial Record – Trial Summary

How did the student's performance change when using the devices?

How did the student like using each device? Did the student prefer one of the devices?

What are the advantages of using the devices?

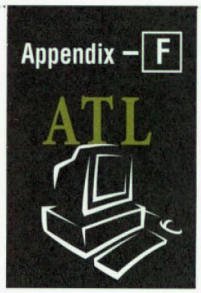
What are the disadvantages of using the devices?

How long can the student be expected to use the devices?

Recommendations from trial:

Adapted with permission from Penny Reed and Gayl Bowser, *Assistive Technology Pointers for Parents* (Winchester, OR: Coalition for Assistive Technology in Oregon, 2000), p. 55. www.edtechpoints.org

©Alberta Education



Assistive Technology for Learning Trial Record: Student Report

1. Assistive technology for learning I tried: _____

2. Things I like about the assistive technology for learning I tried: _____

3. Things I don't like about the assistive technology for learning I tried: _____

4. If there was more than one tool to try, the one I liked best was: _____

5. Why I liked it best: _____

6. If I was the only one using this tool, how did that feel? How did I explain this tool to other students?

7. Things I want to tell the teachers and others about the assistive technology for learning that I tried:

8. Questions I want to ask the teachers and others: _____

AAdapted with permission from Gayl Bowser and Penny Reed, *Hey! Can I Try That? A Student Handbook for Choosing and Using Assistive Technology* (Roseburg, OR: Oregon Technology Access Program and Wisconsin Assistive Technology Initiative, 2001), p. 13. www.edtechpoints.org

©Alberta Education

Monitoring My Assistive Technology for Learning Use: Student Report

1. What kind of help will I need in order to use my assistive technology for learning effectively (e.g., tutorials, help from my teacher)?

2. What will I need to learn in order to make my assistive technology for learning work?

3. What will I need to do every day to make this technology for learning work for me?

4. Problems I am having with my assistive technology for learning:

5. Things I want to tell the teachers and others about my assistive technology for learning:

6. Questions I want to ask my teachers and others:

Adapted with permission from Gayl Bowser and Penny Reed, *Hey! Can I Try That? A Student Handbook for Choosing and Using Assistive Technology* (Roseburg, OR: Oregon Technology Access Program and Wisconsin Assistive Technology Initiative, 2001), p. 17. www.edtechpoints.org

©Alberta Education

Parent Feedback on Assistive Technology for Learning

1. Changes in my child's performance since using assistive technology for learning:

2. Changes in how my child feels about using assistive technology for learning:

3. Benefits of the assistive technology for learning use:

4. Drawbacks of the assistive technology for learning use:

5. Other places and situations in which this assistive technology for learning might be useful:

Adapted with permission from Penny Reed and Gayl Bowser, *Assistive Technology Pointers for Parents* (Winchester, OR: Coalition for Assistive Technology in Oregon, 2000), p. 39. www.edtechpoints.org

©Alberta Education

(continued)

Parent Feedback on Assistive Technology for Learning

6. **Things I want to share with the team:**

My thoughts and feelings: _____

_____

_____

_____

_____

_____

Supporting evidence or data: _____

_____

_____

_____

_____

_____

7. **My questions for the team:**

_____

_____

_____

_____

_____

©Alberta Education

Record of Assistive Technology for Learning Maintenance Information

I have a _____. I use it to _____

_____

ID Information

Serial number _____

Purchased on _____ Warranty good until _____

Purchased from _____

Address _____

Telephone number _____ Customer support phone number _____

Fax number _____

Maintenance

Was a maintenance contract purchased? ☐ No ☐ Yes If yes, it is in effect until _____

Maintenance and repair record _____

_____

_____

_____

My service provider for this device is _____

Telephone number _____

I will get my device in for repair by _____

Back-up Plan

If my device breaks down, my back-up plan is _____

_____

_____

_____

I can contact this person for support _____

at _____

Adapted from Minnesota Department of Children, Families and Learning, *Minnesota Assistive Technology Manual* (Roseville, MN: Minnesota Department of Children, Families and Learning, 2002), "AT Log for Transition Planning." Permission to use is granted if credit is maintained.

©Alberta Education

Assistive Technology for Learning Transition Planning Checklist

Setting the Stage for Transition

Early in the school year, students and their families can be introduced to the transition process and students can begin to participate in their own IPP planning process.

Self-advocacy

- ☐ Students have opportunities to learn how to describe their specific use of assistive technology for learning or related strategies to meet IPP goals.
- ☐ Students have opportunities to explain their use of assistive technology for learning or related strategies to appropriate individuals.

Independent Educational Strategies

- ☐ Discuss the strategies and ATL devices that students use regularly, including barriers to use.
- ☐ Student is able to identify appropriate times to use assistive technology for learning.

Vocational Planning

- ☐ Talk about student's responsibilities and activities at home and in the community, and potential ways to use assistive technology for learning or related strategies to support these activities.
- ☐ Select and implement appropriate technology strategies for home and in the community.
- ☐ Discuss barriers (both real and perceived) on student's educational or recreational activities.
- ☐ Explore additional strategies and devices based on needs.
- ☐ If needed, explore and contact appropriate funding sources for purchase, lease and/or maintenance of long-term assistive technology for learning equipment.

Mid-stage Transition

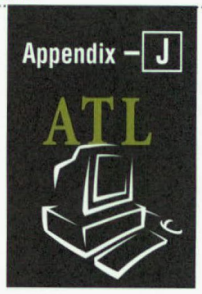
Students and their families continue to build an understanding of the transition process and the new expectations that will be part of the next environment. Students practise skills, gather information and set goals for participating in their next learning and/or work environment.

Self-advocacy

- ☐ Discuss strategies students and their families can use to independently access information about useful assistive technology for learning and needs (e.g., support groups, Web sites, advocacy and peer groups, library, condition-specific health associations).
- ☐ Discuss available services.

Adapted from Minnesota Department of Children, Families and Learning, *Minnesota Assistive Technology Manual* (Roseville, MN: Minnesota Department of Children, Families and Learning, 2002), "Assistive Technology Transition Planning Checklist." Permission to use is granted if credit is maintained. Based on Transition Planning Checklist, www3.bc.sympatico.ca/steeksma/ Medical/transition.htm#Your Plan-it and the work of Project TechTrans, an outreach project, sponsored by OSERS, at Oregon Health Sciences, www.ohsu.edu/cdrc/at/index.shtml.

©Alberta Education



(continued)

Assistive Technology for Learning Transition Planning Checklist

☐ Begin a list of strategies to independently use and support assistive technology for learning devices.

Educational and Vocational Planning

☐ Discuss and explore school experiences, favourite subjects, plans for post-secondary studies, ideas for careers.

☐ Investigate opportunities for career prep courses or volunteering.

☐ Continue discussion of use of assistive technology for learning devices and strategies for future environments.

☐ Expand selection and implementation of appropriate technology strategies for home.

☐ Discuss barriers (both real and perceived) to student's educational or recreational activities.

☐ Explore additional strategies needed based on needs.

☐ If needed, explore and contact appropriate funding sources for purchase, lease and/or maintenance of long-term assistive technology for learning equipment.

Making the Transition

Students and their families prepare to move from one learning environment to the next with confidence; students use assistive technology for learning effectively and independently.

Self-advocacy

☐ Continue discussion of available support services.

☐ Formalize checklist of assistive technology for learning strategies and interventions for assistive technology for learning support.

☐ Students maintain assistive technology for learning record book to keep track of assistive technology for learning providers, repair and maintenance providers, vendors.

☐ Students meet with new teachers before transitions to support continuum of services.

Vocational Planning

☐ Learning team members are in agreement of strategies and interventions needed for transition.

☐ Appropriate service providers participate in and support transition plan.

☐ Appropriate funding is secured for needed devices and interventions.

©Alberta Education

Sample Questions for Parents about Assistive Technology for Learning

Sample questions **to ask myself**	Sample questions **to discuss with my child's learning team**

Investigating assistive technology for learning

- What are the specific problems that my child is encountering in school (such as reading assigned text, writing clearly and legibly, seeing written words, speaking clearly, communicating needs and interests)? What evidence do I have of these difficulties?
- Could my child perform better if the way difficult tasks were done was changed?
- Are you aware of new solutions (that could include no-tech to high-tech) that might help my child be more successful?
- If there is no one on my child's learning team who is familiar with current ATL solutions, who in the district is knowledgeable about assistive technology for learning? How can we access that person?
- What assistive technology for learning, if any, has my child tried? What data did the trial generate? How long did the trial last? Did it make a difference?

During the assessment and trial period

- What does my child say about how he or she feels about the assistive technology for learning being tried?
- What changes in my child's performance and attitude, if any, am I seeing at home while my child is using this assistive technology for learning?
- Who is coordinating the assessment and trials to identify the best assistive technology for learning solutions for my child?
- In what environments will my child need assistive technology for learning?
- How long will the trials take? By what date will we know which assistive technology for learning device, if any, will work best for my child?

Adapted with permission from Penny Reed and Gayl Bowser, *Assistive Technology Pointers for Parents* (Winchester, OR: Coalition for Assistive Technology in Oregon, 2000), pp. 11, 23, 29, 35, 41. www.edtechpoints.org

©Alberta Education

(continued)

Sample Questions for Parents about Assistive Technology for Learning

Sample questions **to ask myself**	Sample questions **to discuss with my child's learning team**

After the initial assessment and trials

- Did the results of the assessment and trials point us clearly toward the specific assistive technology for learning that could help my child?
- Does my child need to use this assistive technology for learning at home as well as at school? For what specific tasks? If yes, how will the use of assistive technology for learning at home impact our family?
- Do I need to know how to use the assistive technology for learning my child is using? How much do I need to know?
- For what specific tasks will my child use the assistive technology for learning at school?
- When and how often will my child use the assistive technology for learning during the school day?
- How long will it take to put the assistive technology for learning into place?
- What related service, if any, will my child need in order to use the technology effectively?
- What will other students in the classroom be told about my child's use of this technology?
- When my child uses this assistive technology for learning in school, what can I do to support his or her success?
- If my child uses assistive technology for learning only at school, how will I know how things are going?

During ongoing monitoring

- What changes, if any, does my child report about how things are going at school since he or she began using assistive technology for learning?
- What changes, if any, have I seen at home since my child began using assistive technology for learning?
- What differences are you seeing in my child's performance with the use of assistive technology for learning?
- What problems are there, if any?
- How are you keeping track of what is working and not working in relation to my child's assistive technology for learning use?
- What specific things do I need to know about the assistive technology for learning that my child is using? Who will teach me what I need to know?

©Alberta Education

(continued)

Sample Questions for Parents about Assistive Technology for Learning

Sample questions **to ask myself**	Sample questions **to discuss with my child's learning team**

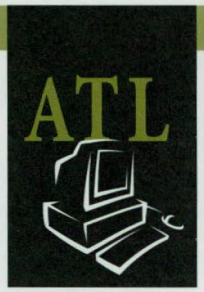
Planning for transitions

- Is the assistive technology for learning working for my child in the ways I expected?
- What have been the benefits of using the assistive technology for learning?
- What have been the drawbacks, if any, of using the assistive technology for learning?
- If there were drawbacks, how can we overcome them in the future?
- Now that my child is using assistive technology for learning at school, what are the other situations or environments where he or she could use the same technology?
- Will my child use the same assistive technology for learning next year?
- What assistive technology for learning supports will my child need in the future?
- If my child is making a transition to a new setting, will the same assistive technology for learning be available at the new setting? Are the staff knowledgeable about that specific technology? Is it compatible with other technology in that setting? What needs to be done to ensure the transition is successful?

©Alberta Education

NOTES

©Alberta Education

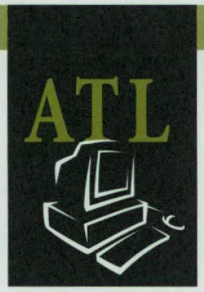


NOTES

©Alberta Education

NOTES

©Alberta Education

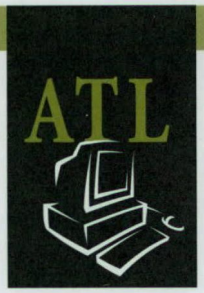


NOTES

©Alberta Education

NOTES

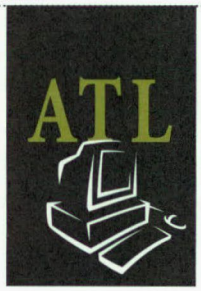
©Alberta Education



NOTES

©Alberta Education

< cut >



RESPONSE GUIDE

Alberta Education

Learning and Teaching Resources Branch
8th Floor, 44 Capital Boulevard,
10044 – 108 Street, Edmonton, Alberta, T5J 5E6

Mail or fax by **June 30, 2005** to the attention of
Sandra Mukai, Research Assistant, (780) 422–0576

From (optional): _____

Total pages (including this one): _____

Subject: Field review of draft of assistive technology for learning information to appear in revised IPP guide

Date: _____

I would rate my current knowledge and use of assistive technology for learning as ☐ nonexistent ☐ somewhat aware ☐ experimenting ☐ successfully integrated into my teaching practice.

Field-review response

This monograph is a draft version of a chapter on assistive technology for learning that is part of a new teacher resource on Individualized Program Plans.

1. This chapter offers a clear and accurate overview of assistive technology for learning.

☐ strongly agree ☐ agree ☐ disagree ☐ strongly disagree

If disagree, please explain _____

_____

_____

_____

_____

2. The information and samples in this chapter are practical and contain enough detail to help teachers begin to infuse assistive technology for learning into the IPP process.

☐ strongly agree ☐ agree ☐ disagree ☐ strongly disagree

If disagree, please explain _____

_____

_____

_____

_____

©Alberta Education

3. The information in this chapter is well-organized and easy-to-use.

☐ strongly agree ☐ agree ☐ disagree ☐ strongly disagree

If disagree, please explain _____

_____

_____

_____

4. This chapter is written in clear language and maintains a positive, teacher-friendly tone.

☐ strongly agree ☐ agree ☐ disagree ☐ strongly disagree

If disagree, please explain _____

_____

_____

_____

5. Teachers will find the following appendices in this section helpful for infusing assistive technology for learning into the IPP process.

A	Assistive Technology for Learning Checklist	☐ Yes	☐ No
B	Printing and Handwriting Inventory	☐ Yes	☐ No
C	Writing Inventory	☐ Yes	☐ No
D	Assistive Technology for Learning Investigation: Student Report	☐ Yes	☐ No
E	Assistive Technology for Learning Trial Record	☐ Yes	☐ No
F	Assistive Technology for Learning Trial Record: Student Report	☐ Yes	☐ No
G	Monitoring My Assistive Technology for Learning Use: Student Report	☐ Yes	☐ No
H	Parent Feedback on Assistive Technology for Learning	☐ Yes	☐ No
I	Record of Assistive Technology for Learning Maintenance Information	☐ Yes	☐ No
J	Assistive Technology for Learning Transition Planning Checklist	☐ Yes	☐ No
K	Sample Questions for Parents about Assistive Technology for Learning	☐ Yes	☐ No

6. What additional information should be included in this section?

_____

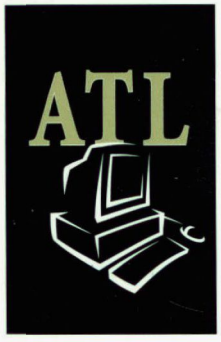
_____

_____

_____

_____

< cut >



ATL

This monograph is a chapter from Alberta Education's new teacher guide *Individualized Program Planning*. The complete teacher guide is currently in field review and will be published in Fall 2005.

To view the complete field-review version, visit Alberta Education's Web site at: www.education.gov.ab.ca/k_12/specialneeds before June 30, 2005

. . . . . .

Alberta
EDUCATION

Spring 2005 < DRAFT >